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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 936,692	09 17 2001	Peter X. Ma	UMJ-105-B (UM1667)	9241

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JULIA CHURCH DIERKER
DIERKER & GLASSMEYER, P.C.
3331 W. BIG BEAVER RD., SUITE 109
TROY, MI 48084-2813

EXAMINER

SZEKELY, PETER A

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 05/16/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,692

Applicant(s)

MA ET AL.

Examiner

Peter Szekely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 07 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 & 6
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Specification

1. The disclosure is objected to because of the following: On page 14, lines 5 and 6, poly (acrylamide-acrylic acid) and poly (hydroxyethyl methacrylate-methacrylic acid) do not contain any hydrophobic monomers.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 12 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Poly (acrylamide-acrylic acid) and poly (hydroxyethyl methacrylate-methacrylic acid) contain no hydrophobic monomers.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 7, 8, 10, 19 and 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. The duration of the continuous release claimed in claims 2 and 19 is unknown. Claims 7, 8, 10 and 22-24 are rendered indefinite by the word "derivatives". Carbon dioxide is a derivative of all organic compounds. Furthermore, acids are derivatives of esters and visa-versa and one is hydrophobic and the other is hydrophilic. Salts and esters is another example.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Tezuka et al. 4,089,830, Wilson et al. 4,569,954, Wilson et al. 4,758,612, Englebrecht 4,872,936, Okayabashi et al. 5,051, 453, Kato et al. 5,520,725 or National Res Dev Corp GB 1,507,981.

9. Tezuka et al disclose glass ionomer cement and acrylic acid-methylmethacrylate copolymer in claim 1. Wilson et al. ('954) teach acid-vinyl chloride copolymer in the paragraph overlapping columns 2 and 3 and claim 3 and fluoroaluminosilicate glass powder in Example 1. Wilson et al. ('612) recite copolymers of acids with acrylonitrile, hydrocarbons and ethers in column 1, lines 53-62. For fluoroaluminumsilicate see column 2, lines 47-62. Engelbrecht divulges phosphorus containing acidic copolymers in columns 3-8 and ionomer cement in claim 1. Okayabashi et al. reveal aluminofluorosilicate in claim 1 and copolymers in the paragraph overlapping columns 2

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and 3. Poly (methacrylic acid-methyl methacrylate) is one of the possible copolymers. Kato et al. display fluoroaluminosilicate glass powder in the paragraph overlapping columns 4 and 5 and carboxylic acids copolymerized with acrylonitrile, methacrylic esters, vinyl chloride or vinyl acetate in column 5, lines 27-67. National Res Dev Corp presents styrene-maleic anhydride copolymer and aluminosilicate in the Abstract. A reference that clearly names the claimed species anticipates the claim no matter how many other species are named. Ex parte A, 17 USPQ 2d 1716 Board of Appeals and Interferences 1990). Applicants' claims are not novel.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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12. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tezuka et al. 4,089,830, Wilson et al. 4,569,954, Wilson et al. 4,758,612, Englebrecht 4,872,936, Okayabashi et al. 5,051, 453, Kato et al. 5,520,725 or National Res Dev Corp GB 1,507,981.

13. All references have been discussed already. All references mention applicants' glass ionomers and polymers among them hydrophilic-hydrophobic copolymers, which can be used in dental cement. Since picking and choosing may be entirely proper in the context of an obviousness rejection, (in re Arkley 455 F.2d 587, 172 USPQ 526, [CCPA1972]), it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to select applicants' copolymers from a list of equivalents.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Szekely whose telephone number is (703) 308-2460. The examiner can normally be reached on 7:00 a.m-5:30 p.m. Tuesday-Friday.

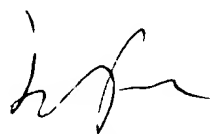
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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A handwritten signature in black ink, appearing to read 'P. Szekely', written in a cursive style.

Peter Szekely
Primary Examiner
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P.S.
May 14, 2003